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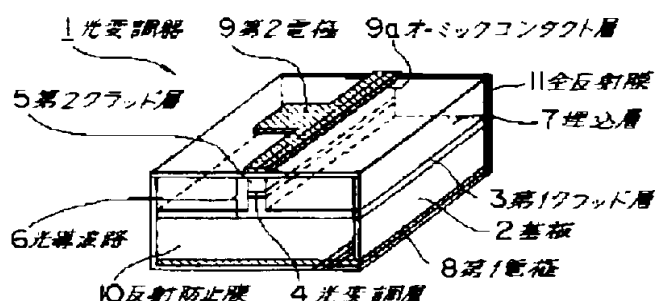
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TITLE : OPTICAL MODULATOR



ABSTRACT : PROBLEM TO BE SOLVED: To make it possible to simplify the element structure and to realize a high-speed modulation by providing one end face of a substrate with an antireflection film and providing the other end face of the substrate with a total reflection film.

SOLUTION: The optical modulator 1 constitutes an optical waveguide 6 from a first clad layer 3 formed on a substrate 2, striped optical modulation layers 4 formed thereon and a second clad layer 5 formed thereon. The light (incident light) sent from outside toward the optical modulator 1 is introduced from the end face on which an antireflection film 10 is applied to the waveguide 6. The light propagates successively in the waveguide 6, reflects totally at the end face on which a total reflection film 11 is applied, propagates again in the waveguide 6 and is emitted from the end face applied with the antireflection film 10. The intensity distribution in the waveguide direction of the light of this time changes with an increase in the voltage impressed by a first electrode 8 and a second electrode 8. In such a case, the operating voltage is decreased by prolonging the element length of the optical modulator 1 and a twice higher extinction ratio is obtd. with the same voltage.

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